a plurality of storage devices, the storage system communicating data to and from a plurality of host computers, wherein each host has at least one agent for communicating with the storage system, the method comprising:

providing a storage management server between a plurality of clients and the plurality of storage devices,

providing to the storage management server from the at least one agent information relating to the configuration of the storage system;

collect, from the storage management server, information relating to the configuration of the storage system; and

providing by the storage management server, the information to at least one of the clients.

REMARKS

This Amendment is in response to the Office Action July 3, 2002. Claims 1-20 remain pending.

The Examiner has rejected Claims 1 and 14, under 35 USC 112, second paragraph for indefiniteness. The Examiner has rejected Claims 1-8, 10-12, and 16-20 under 35 USC 103(a) as being obvious over U.S. Patent 6,253,240 to Axberg et al. (Axberg) in view of U.S. Patent 6,131,112 to Lewis et al. (Lewis). The Examiner has rejected Claim 9 under 35 USC 103(a) as being obvious over Axberg in view of U.S. Patent 5,999,973 to Glitho et al. (Glitho). The Examiner has also rejected Claims 13 and 14 under 35 USC 103(a) as being obvious over Axberg and Lewis in view of U.S. Patent 6,330,572 to Sitka (Sitka). The Examiner has rejected Claim 15 under 35 USC 103(a) as being obvious over Axberg and Lewis in view of U.S. Patent 5,854,102 to McChesney (McChesney).

Applicants have amended Claims 1, 14, and 16. Claims 2-15 all depend upon independent Claim 1 and Claims 17-20 are dependent upon Claims 16, and thus in effect each pending claim has been amended. Applicants hereby request reconsideration of all the claim rejections and allowance of amended Claims 1-20.

Regarding the indefiniteness rejection of Claims 1 and 14, Applicants have

amended each of these claims to overcome the informalities cited by the Examiner and these rejections are believed to be mooted by these amendments.

Regarding the obviousness rejection of amended Claims 1-8, 10-12, and 16-20 over Axberg in view of Lewis, Applicants point to the well-known three basic criteria for obviousness that must be met if an obviousness rejection is to have proper merit. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references; second, there must be a reasonable expectation of success; and, finally, the prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the modification and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure. (MPEP 2143).

Here, the Examiner has asserted that it would have been obvious to modify Axberg in view of Lewis because "the correlation of data shared by multiple clients contributes to the accurate determination of faults within managed network elements." But this is a vague generality that isn't congruent with Applicants' invention, which provides an advantage of transferring storage status information via a novel network including storage servers in communication with related agents server information between systems with different operating system types. There is no teaching or suggestion in either of the references to make any modification to Axberg in view of Lewis so there could be no reasonable expectation of success of yielding Applicants' invention. Thus, the required prongs of obviousness are not met.

Applicants claim a network architecture including a storage management server and storage system agents and a method of using the server and agents for storage management in respective Claims 1 and 16. Axberg, on the other hand, is-directed toward a graphical user interface display for configuring a storage network. There is no reference to the agents or methods of employing such to provide the architectural or process advantages of Applicants claimed invention. Lewis is directed to a gateway for integration between a network management platform and a system management platform. The combination of the two does not yield Applicants' invention and there is no motivation to combine since the problems addressed are remarkably different.

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The Axberg reference in view of Lewis does not teach or suggest, as in Applicants' Claim 1 "(a) network architecture comprising a storage system," and wherein there is also included "one or more storage management servers in communication with, at least one agent, the plurality of clients and the plurality of storage devices" Nor does the Axberg reference in view of Lewis teach or suggest, as in-Applicants' claims the architecture including "one or more storage management servers providing information received from an agent and relating to the operation status of the storage devices to at least one of the clients."

The Axberg reference in view of Lewis does not teach or suggest, as in Applicants' Claim 16 a "method of managing a storage system including a plurality of storage devices, the storage system communicating data to and from a plurality of host computers," wherein each host has at least one agent for communicating with the storage system. Nor does the combination teach or suggest providing to the storage management server from the at least one agent information relating to the configuration of the storage system which is provided by the server to the clients.

Applicants respectfully assert that Axberg in view of Lewis does not render Applicants' claims obvious, because it fails to meet the requirements for obviousness for the reasons given above. Applicants further respectfully assert that the rejection under 103(a) of Claims 1-8, 10-12, and16-20 should be removed in view of the amended claims and the arguments above.

Regarding the obviousness rejections of claims 9, 13-14, and 15 which all depend on amended claim 1 and which all stem from the primary reference of Axberg, Applicants respectfully suggest that these rejections are unwarranted and improper for the same reasons as discussed above with reference to the obviousness rejection of other claims depending from 1 and relying upon the teachings of at least Axberg.

For the reasons given above, Applicants respectfully suggest that Claims 1-20, are now in condition for allowance. Accordingly, notice of allowance of these claims is hereby respectfully requested.

Attached hereto is a marked up version of the changes made to the claims by the current amendment. The attached page is captioned, "Version with Markings to Show Changes made to Claims."

Should the Examiner feel that a telephonic discussion may assist in furthering this matter toward issuance in due course or should the Examiner have concerns or questions, then the Examiner is invited to call the practitioner listed below at the number given.

Respectfully submitted,

Sept. 24, 2002
Date

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Version with Markings to Show Changes made to Claims

1.   (Once Amended) A network architecture comprising;

a storage system including a plurality of storage

devices;

a plurality of host computers, each host computer including at least one

agent for transmitting data to and retrieving data from one or more of the plurality of

storage devices;

a plurality of clients; and

one or more [a] storage management servers [server] in communication

with [connected between], at least one agent, the plurality of clients and the plurality of

storage devices,

the one or more storage management servers [server] providing information

received from an agent and relating to the operation status of the storage devices to at

least [on] one of the clients.

14. (Once Amended) The network architecture of claim 1 wherein each of the one or

more storage management servers includes:

a poller for gathering information relating to the operation status of the storage

device; and

a central repository for storing information relating to the operation status of said

one of the storage devices; and

an object server for distributing the information relating to the operation status of

said one of the storage devices to at least one of the clients.

16.   (Once Amended) A method of managing a storage system including

a plurality of storage devices, the storage system communicating data to and from a plurality of host computers, wherein each host has at least one agent for communicating with the storage system, the method comprising:

providing a storage management server between a plurality of clients and the plurality of storage devices,

providing to the storage management server from the at least one agent information relating to the configuration of the storage system;

collect, from the storage management server, information relating to the configuration of the storage system; and

providing by the storage management server, the information to at least one of the clients.